

AMENDMENTS TO THE CLAIMS

The following is a listing of claims that replaces all prior versions, and listings, of claims in the application:

Claims 1-11 (Currently Cancelled).

Claim ¹~~12~~ (Currently Amended): An isolated nucleic acid sequence ~~encoding a centromere-associated protein E gene product, said sequence encoding a protein having a plus-end directed core motor domain comprising an amino acid sequence~~ that has greater than 80% amino acid sequence identity to a ~~Xenopus centromere-associated protein E core motor domain, comprising~~ amino acid residues 1-324 of SEQ ID NO:1, wherein said protein has at least one activity chosen from (a) plus end-directed microtubule motor activity, (b) ATPase activity, (c) microtubule binding activity, and (d) specific binding to antibody that is specific for a polypeptide sequence from amino acid 2396 to amino acid 2954 of SEQ ID NO:1.

Claim ²~~13~~ (Previously Amended): The isolated nucleic acid sequence of claim ~~12~~, wherein said sequence has a nucleotide sequence of SEQ ID NO:2.

Claim 14 (Previously Cancelled).

Claim ³~~15~~ (Previously Amended): The isolated nucleic acid sequence of claim ~~12~~, wherein said sequence encodes a protein having an average molecular weight of about 300-350 kDa.

Claims 16-38 (Currently Cancelled).

Claim 39 (Previously Cancelled).

Claims 40-42 (Currently Cancelled).

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Claim ~~43~~ (Currently Amended): An isolated nucleic acid sequence ~~encoding a centromere-associated protein E gene product, said sequence encoding a protein having a core motor domain~~ comprising amino acid residues 1-324 of SEQ ID NO:1.

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Claim ~~44~~ (Previously Added): The isolated nucleic acid sequence of Claim ~~12~~, wherein said sequence encodes a protein having a plus-end directed core motor domain that has greater than 85% amino acid sequence identity to said *Xenopus* centromere-associated protein E core motor domain.

⁵
Claim ~~45~~ (Previously Added): The isolated nucleic acid sequence of Claim ~~12~~, wherein said sequence encodes a protein having a plus-end directed core motor domain that has greater than 90% amino acid sequence identity to said *Xenopus* centromere-associated protein E core motor domain.

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Claim ~~46~~ (Previously Added): The isolated nucleic acid sequence of Claim ~~12~~, wherein said sequence encodes a protein having a plus-end directed core motor domain that has greater than 95% amino acid sequence identity to said *Xenopus* centromere-associated protein E core motor domain.

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Claim ~~47~~ (New): The isolated nucleic acid sequence of Claim ~~12~~, wherein said protein has plus end-directed microtubule motor activity.

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Claim ~~48~~ (New): The isolated nucleic acid sequence of Claim ~~12~~, wherein said protein has ATPase activity.

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Claim ~~49~~ (New): The isolated nucleic acid sequence of Claim ~~12~~, wherein said protein has microtubule binding activity.

[Claim 50 (New): The isolated nucleic acid sequence of Claim 12, wherein said protein specifically binds to antibody that is specific for a polypeptide sequence from amino acid 2396 to amino acid 2954 of SEQ ID NO:1.

¹¹
Claim ~~51~~ (New): The isolated nucleic acid sequence of Claim ~~43~~¹⁰, wherein said protein has plus end-directed microtubule motor activity.

¹²
Claim ~~52~~ (New): The isolated nucleic acid sequence of Claim ~~43~~¹⁰, wherein said protein has ATPase activity.

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Claim ~~53~~ (New): The isolated nucleic acid sequence of Claim ~~43~~¹⁰, wherein said protein has microtubule binding activity.

[Claim 54 (New): The isolated nucleic acid sequence of Claim 43, wherein said protein specifically binds to antibody that is specific for a polypeptide sequence from amino acid 2396 to amino acid 2954 of SEQ ID NO:1.]

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Maha Hamdan on October 29, 2003.

The application has been amended as follows:

In the claims:

Claims ~~50~~ and ~~54~~ were cancelled.

Claim ~~12~~¹ (three times amended) An isolated nucleic acid sequence encoding a protein comprising an amino acid sequence that has greater than 80% amino acid sequence identity to amino acid residues 1-324 of SEQ ID NO: 1, wherein said protein has at least one activity chosen from (a) plus end-directed microtubule motor activity, (b) ATPase activity, and (c) microtubule binding activity[, and (d) specific binding to antibody that is specific for a polypeptide sequence from amino acid 2396 to amino acid 2954 of SEQ ID NO: 1].

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Claim ~~13~~³ (two times amended) The isolated nucleic acid sequence of claim ~~12~~¹², wherein

² said sequence encodes a protein having [an average] a molecular weight of about 300 [-] to about

¹ 350 kDa.

Any inquiry concerning this communication or earlier communications from the Office should be directed to Anne Holleran, Ph.D. whose telephone number is (703) 308-8892. Examiner Holleran can normally be reached Monday through Friday, 9:30 am to 2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa, Ph.D. can be reached at (703) 308-3995.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at telephone number (703) 308-0196.

Anne L. Holleran
Patent Examiner
October 29, 2003

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OCTOBER 29, 2003

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